REQUIRED SUPPLEMENTARY INFORMATION

Condition Assessments and Preservation of Infrastructure Eligible for Modified Approach

Roads

The County performs condition assessments on its network of roads through the King County Pavement Management System. This system generates a Pavement Condition Index (PCI) for each segment of arterial and local access road in the network. The PCI is a numerical index from zero to one hundred (0 – 100) that represents the pavement's functional condition based on the quantity, severity, and type of visual distress, such as pavement cracking. Based on the PCI score, condition ratings are assigned as follows: a PCI of less than 30 is defined as "poor to substandard" (heavy pavement cracking and potholes); a PCI of 30 or more but less than 50 is defined to be in "fair" condition (noticeable cracks and/or utility cuts); and a PCI of between 50 and higher is defined to be in "excellent to good" condition (relatively smooth roadway). Condition assessments are undertaken every three years.

The most recent condition assessments of the County's roads are shown below. The 2006-2005 data shows mid-cycle numbers for roads assessed during 2006-2005 and normalized by including the previous cycle scores for roads not scheduled to be assessed until 2007.

	2006-2005		2004-2002		2001-1999	
Condition ratings	**(miles)**	**%**	**(miles)**	**%**	**(miles)**	**%**
Arterial roads						
Excellent to good	440.1	80.9	442.9	81.7	451.1	83.0
Fair	52.1	9.6	61.1	11.3	44.5	8.2
Poor to substandard	52.0	9.5	38.0	7.0	47.6	8.8
Total	544.2	100.0	542.0	100.0	543.2	100.0
Local access roads						
Excellent to good	1,059.0	81.2	1,075.4	81.6	1,031.1	80.0
Fair	137.0	10.5	139.0	10.6	132.3	10.3
Poor to substandard	108.5	8.3	102.9	7.8	125.5	9.7
Total	1,304.5	100.0	1,317.3	100.0	1,288.9	100.0

It is the policy of the King County Road Services Division to maintain at least 80 percent of the road system at a PCI of 40 or better. The following table (derived from the table of condition ratings) shows the number and percentage of miles of roads that meet the 40 PCI level.

	2006-2005		2004-2002		2001-1999	
PCI score interval	**(miles)**	**%**	**(miles)**	**%**	**(miles)**	**%**
Arterial roads						
PCI 40 - 100	469.4	86.2	475.6	87.7	477.8	88.0
PCI 0 - 39	74.8	13.8	66.4	12.3	65.4	12.0
Total	544.2	100.0	542.0	100.0	543.2	100.0
Local access roads						
PCI 40 - 100	1,134.8	87.0	1,165.6	88.5	1,108.3	86.0
PCI 0 - 39	169.7	13.0	151.7	11.5	180.6	14.0
Total	1,304.5	100.0	1,317.3	100.0	1,288.9	100.0

REQUIRED SUPPLEMENTARY INFORMATION – continued

The majority of roads that fall below the established rating (PCI = 40) are local access roads that are situated in rural areas.

Below is information on planned (budgeted) and actual expenditures incurred to maintain and preserve the road network at or above the minimum acceptable condition level from 2002 to 2006. The budgeted amount is equivalent to the anticipated amount needed to maintain roads up to the required condition level (in thousands):

	2006	2005	2004	2003	2002
Budgeted	$26,575	$24,367	$31,190	$38,830	$37,040
Expended	16,689	15,828	29,126	34,590	34,950

Underspending of budgeted amounts usually results when roads are removed from the project list because of conflicts with anticipated utility work; lowering of priority due to cost efficiency considerations, such as when only a few roads are to be resurfaced in remote locations; and weather-related work reduction or stoppages. The shift in the level of budgeted and expended amounts during 2005 and 2006 is due to a reclassification of activities among capital, preservation, and maintenance as prescribed by the Federal Highway Administration (FHWA).

Bridges

King County currently maintains 187 bridges. Physical inspections to determine the condition of bridges and the degree of wear and deterioration are carried out at least every two years. Inspections reveal deficiencies in bridges such as steel corrosion, damaged guardrails, rotten timbers, deteriorated bridge decks, bank erosion, and cracked concrete. These are documented in an inspection report along with recommended repairs and needed services. Five pedestrian bridges are included in the list of bridges being maintained by the County. These are also subject to condition assessments but under different standards as the more heavily used vehicular bridges.

Each year the County undergoes a bridge prioritization process to determine potential candidates for replacement or rehabilitation. A weighted 10-point priority scale (sufficiency rating, seismic rating, geometrics, hydraulics, load limits, traffic safety, serviceability, importance, useful life, and structural concern) ranks the bridges in order; the results are considered in the planning and programming of major bridge studies and construction projects in the Roads Capital Improvement Program.

A key element in the priority scale is the sufficiency rating, the measure considered by state and federal governments as the basis for establishing eligibility and priority for bridge replacement or rehabilitation. Sufficiency rating is a numerical rating of a bridge based on its structural adequacy and safety, essentiality for public use, and its serviceability and functional obsolescence. This index may vary from 100 (a bridge in new condition) to 0 (a bridge incapable of carrying traffic). A sufficiency rating of 50 or over indicates a bridge with a good deal of service life remaining. A bridge that scores between 0 and 49 would be considered for replacement funding evaluation, though typically only bridges that score less than 30 are selected for Federal replacement funding.

REQUIRED SUPPLEMENTARY INFORMATION – continued

Below are the three most recent bridge sufficiency ratings. The number of bridges reported in 2002 and 2004 were revised to include bridges that were co-owned with cities but for which King County is primarily responsible for the management and maintenance. These bridges fall under the 50–100 sufficiency rating interval.

Bridge sufficiency rating	Number of Bridges 2006	2004	2002
0 - 20	6	9	10
21 - 30	2	2	7
31 - 49	20	20	16
50 - 100	159	156	154
Totals	187	187 *	187 *

* revised to include co-owned bridges

It is the policy of the King County Road Services Division to maintain bridges in such a manner that no more than 12 will have a sufficiency rating of 20 or less. A rating of 20 or less is usually indicative of a bridge with a structural deficiency. The most common remedy is full replacement or rehabilitation of the bridge.

Amounts budgeted and spent to maintain and preserve bridges from 2002-2006 are shown in the following table (in thousands):

	2006	2005	2004	2003	2002
Budgeted	$16,590	$20,000	$4,040	$3,810	$4,210
Expended	11,173	12,940	3,080	3,350	3,830

The budgeted amount is equivalent to the anticipated amount needed to maintain and preserve the bridges up to the required condition level. The shift in the level of budgeted and expended amounts during 2005 and 2006 is due to a reclassification of activities among construction, preservation, and maintenance as prescribed by the FHWA. Generally, backlogs in maintenance work orders greatly affect the trend in maintenance costs. Such backlogs could result from increased bridge traffic, higher weight loads, labor shortages, stringent environmental restrictions, and an aging inventory.